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KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

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MORTELL, JOHN F	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/563,664
Filing Date: January 06, 2006
Appellant(s): LEE ET AL.

Gerard A. Messina
Reg. No. 35,952
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 7, 2010, appealing from the Office action mailed August 8, 2009.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 10-30 were rejected and pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

2003/0058337 A1	Tanaka	3-2003
6,919,917 B1	Janssen	7-2005
6,226,592 B1	Luckscheiter	5-2001
2003/0045973 A1	Okamoto	3-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. Claims 10-13, 15, 16, 19, 20, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al. (US PG Pub. 2003/0058337 A1).

Regarding claim 10, Tanaka discloses:

> a device for driving assistance for parallel parking a vehicle ([0003], [0045]), comprising:
>
> an output unit for outputting parallel parking driving instructions to a

driver ([0009], [0036]; FIG. 5: 5);

wherein the parallel parking driving instructions provide a driver with a driving zone situated between two trajectories which are calculated in such a way that the vehicle can be moved within the driving zone ([0054]; FIG. 1: R).

Regarding claim 11, Tanaka discloses a device wherein the output unit includes a display configured to display surroundings of the vehicle and to display the driving zone with respect to the displayed surroundings of the vehicle. ([0042], [0053], [0057], [0059], [0060], [0061]; FIG. 1: 12, 13, 14, R, S; FIG. 2: 12, 13, 14, S)

Regarding claim 12, Tanaka discloses a device further comprising a detection unit configured to detect a set steering angle and to determine an anticipated travel path at an unchanged steering angle, the anticipated travel path being displayed at least partially with respect to the surroundings of the vehicle. ([0039], [0054], [0065]; FIG. 1: 7A; FIG. 5: 2, 4)

Regarding claim 13, Tanaka discloses a device wherein the trajectories delimiting the driving zone require at least one full angle of a steering wheel for following the appropriate trajectory. The language, "at least one full angle of a steering wheel" does not specify the magnitude of the angle, and therefore, any angle that varies from a straight trajectory constitutes "at least one full angle of a steering wheel." As shown in the citations for claims 10 and 12 above, Tanaka teaches a device that guides a vehicle in parking when the steering wheel is turned at an angle from a straight trajectory of the vehicle. (See the citations for claims 10 and 12, especially FIGS. 1 and 2)

Regarding claim 15, Tanaka discloses a device further comprising a computer unit configured to determine a parking space suitable for the vehicle. ([0045]; FIG. 2: P)

Regarding claim 16, Tanaka discloses a device wherein an indication for changing a

turning direction of a steering wheel is output. ([0053]; [0054], [0059]; FIG. 1: R, S, 7B)

Regarding claim 19, Tanaka discloses a device wherein:

> the output unit includes a display configured to display surroundings of the vehicle and to display the driving zone with respect to the displayed surroundings of the vehicle (see the citations for claims 10 and 11),
>
> and wherein the trajectories delimiting the driving zone require at least one full angle of a steering wheel for following the appropriate trajectory (see the citations for claim 13).

Regarding claim 20, Tanaka discloses a device further comprising a detection unit configured to detect a set steering angle and to determine an anticipated travel path at an unchanged steering angle, the anticipated travel path being displayed at least partially with respect to the surroundings of the vehicle. (See the citations for claim 12.)

Regarding claim 28, Tanaka discloses:

> a driving aid device for parking a vehicle, comprising:
>
> an output unit for outputting driving instructions to a driver, wherein the driving instructions indicate to the driver a driving range between two trajectories which designate two different determined routes, the routes being determined so that the vehicle is moveable to park it within the driving range. (See the citations for claim 10.)

Claim Rejections - 35 USC § 103

2. Claims 14, 21, 23, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Janssen (US 6,919,917 B1).

Regarding claim 14, Tanaka does not explicitly disclose a device further comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle.

Janssen, in the same field of endeavor, teaches a device for monitoring the environment

of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle for the benefit of providing an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction. (col. 1, lines 38-49; col. 2, lines 29-32; col. 6, lines 16-20; FIG. 1: 9a, 9b, 9c, 9d, 9e; FIG. 6: 9c, 9d, 9e)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle, as taught by Janssen, with the device for driving assistance disclosed by Tanaka because it would enable the device to provide an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction.

Regarding claim 21, Tanaka discloses a device further comprising:

> a computer unit configured to determine a parking space suitable for the vehicle (see the citations for claim 15);
>
> wherein an indication for changing a turning direction of a steering wheel is output (see the citations for claims 15 and 16).

Tanaka does not disclose a device further comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle.

Janssen, in the same field of endeavor, teaches a device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle for the benefit of providing an object-

detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction. (See the citations for claim 14.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle, as taught by Janssen, with the device for driving assistance disclosed by Tanaka because it would enable the device to provide an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction.

Regarding claim 23, Tanaka further discloses a speaker to output an acoustic alert signal when leaving the driving zone. (See the citations for claim 18.)

Regarding claim 24, Tanaka discloses a device further comprising a computer unit configured to determine a parking space suitable for the vehicle, wherein an indication for changing a turning direction of a steering wheel is output (see the citations for claims 15 and 16.), but Tanaka does not disclose a device further comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle.

Janssen, in the same field of endeavor, teaches a device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle for the benefit of providing an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and

driving correction. (See the citations for claim 14.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle, as taught by Janssen, with the device for driving assistance disclosed by Tanaka because it would enable the device to provide an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction.

Regarding claim 27, Tanaka discloses a device further comprising a detection unit configured to detect a set steering angle and to determine an anticipated travel path at an unchanged steering angle, the anticipated travel path being displayed at least partially with respect to the surroundings of the vehicle. (See the citations for claims 10 and 11.)

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Luckscheiter et al. (US 6,226,592 B1).

Regarding claim 17, Tanaka does not disclose a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone.

Luckscheiter, in the same field of endeavor, teaches a system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone for the benefit of assisting a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior. (col.

1, lines 37-40; col. 2, lines 38-45, 57-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone, as taught by Luckscheiter, with the device for driving assistance disclosed by Tanaka because it would enable the device to assist a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Okamoto (US PG Pub. 2003/0045973 A1).

Regarding claim 18, Tanaka does not disclose a device further comprising a speaker to output an acoustic alert signal when leaving the driving zone.

Okamoto, in the same field of endeavor, teaches a parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle for the benefit that the driver can operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route. ([0002], [0043], [0052], [0072]; FIG. 2: 8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route

image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle, as taught by Okamoto, with the device disclosed by Tanaka because it would enable the device to alert the driver to operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route.

5. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Janssen and further in view of Luckscheiter.

Regarding claim 22, the above combination of Tanaka and Janssen teaches the device for driving assistance as recited in claim 21 but does not teach a device further comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone.

Luckscheiter, in the same field of endeavor, teaches a system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone for the benefit of assisting a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior. (See the citations for claim 17.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone, as taught by Luckscheiter, with the device for driving assistance disclosed by Tanaka because it would enable

the device to assist a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior.

Regarding claim 25, the above combination of Tanaka and Janssen teaches the device for driving assistance as recited in claim 24 but does not teach a device further comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone.

Luckscheiter, in the same field of endeavor, teaches a system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone for the benefit of assisting a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior. (See the citations for claim 17.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone, as taught by Luckscheiter, with the device for driving assistance disclosed by Tanaka because it would enable the device to assist a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Janssen and further in view of Okamoto.

Regarding claim 26, the above combination of Tanaka and Janssen teaches the device for driving assistance as recited in claim 24 but does not teach a device further comprising a speaker to output an acoustic alert signal when leaving the driving zone.

Okamoto, in the same field of endeavor, teaches a parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle for the benefit that the driver can operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route. (See the citations for claim 18.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle, as taught by Okamoto, with the device disclosed by Tanaka because it would enable the device to alert the driver to operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route.

7. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Janssen, further in view of Luckscheiter, and further in view of Okamoto.

Regarding claim 29, Tanaka discloses:

> a driving aid device ([0003], [0045]) further comprising:
>
> a detection unit configured to detect a set steering angle and to determine an anticipated travel path at an unchanged steering angle, the anticipated

travel path being displayed at least partially with respect to the surroundings of the vehicle ([0039], [0054], [0065]; FIG. 1: 7A; FIG. 5: 2, 4);

a computer unit configured to determine a parking space suitable for the vehicle ([0045]; FIG. 2: P);

wherein the output unit includes a display configured to display surroundings of the vehicle and to display the driving zone with respect to the displayed surroundings of the vehicle ([0009], [0036], [0042], [0053], [0054], [0057], [0059], [0060], [0061]; FIG. 1: 12, 13, 14, R, S; FIG. 2: 12, 13, 14, S; FIG. 5: 5),

wherein the trajectories delimiting the driving zone require at least one full angle of a steering wheel for following the appropriate trajectory (See the rejection of claim 13 and the citations for that rejection), and

wherein an indication for changing a turning direction of a steering wheel is output ([0053]; [0054], [0059]; FIG. 1: R, S, 7B).

Tanaka does not disclose a device further comprising:

a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle;

a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone; and

a speaker to output an acoustic alert signal when leaving the driving zone.

Janssen, in the same field of endeavor, teaches a device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle for the benefit of providing an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction. (col. 1, lines 38-49; col. 2, lines 29-32; col. 6, lines 16-20; FIG. 1: 9a, 9b, 9c, 9d, 9e; FIG. 6: 9c, 9d, 9e)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle, as taught by Janssen, with the device disclosed by Tanaka because it would enable the device to provide an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction.

The above combination of Tanaka and Janssen does not disclose a device further comprising:

> a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone; and
>
> a speaker to output an acoustic alert signal when leaving the driving zone.

Luckscheiter, in the same field of endeavor, teaches a system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone for the benefit of assisting a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior. (col. 1, lines 37-40; col. 2, lines 38-45, 57-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone, as taught by

Luckscheiter, with the device disclosed by the above combination because it would enable the device to assist a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior.

The above combination of Tanaka, Janssen, and Luckscheiter does not disclose:

> a speaker to output an acoustic alert signal when leaving the driving zone.

Okamoto, in the same field of endeavor, teaches a parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle for the benefit that the driver can operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route. ([0002], [0043], [0052], [0072]; FIG. 2: 8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle, as taught by Okamoto, with the device disclosed by the above combination because it would enable the device to alert the driver to operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route.

Regarding claim 30, Tanaka discloses:

> a device for driving assistance ([0003], [0045]) further comprising:
>
> a detection unit configured to detect a set steering angle and to determine an anticipated travel path at an unchanged steering angle, the anticipated travel path being displayed at least partially with respect to the

surroundings of the vehicle ([0039], [0054], [0065]; FIG. 1: 7A; FIG. 5: 2, 4);

a computer unit configured to determine a parking space suitable for the vehicle ([0045]; FIG. 2: P);

wherein the output unit includes a display configured to display surroundings of the vehicle and to display the driving zone with respect to the displayed surroundings of the vehicle ([0009], [0036], [0042], [0053], [0054], [0057], [0059], [0060], [0061]; FIG. 1: 12, 13, 14, R, S; FIG. 2: 12, 13, 14, S; FIG. 5: 5),

wherein the trajectories delimiting the driving zone require at least one full angle of a steering wheel for following the appropriate trajectory (See the rejection of claim 13 and the citations for that rejection), and
wherein an indication for changing a turning direction of a steering wheel is output ([0053]; [0054], [0059]; FIG. 1: R, S, 7B).

Tanaka does not disclose:

a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle;

a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone; and

a speaker to output an acoustic alert signal when leaving the driving zone.

Janssen, in the same field of endeavor, teaches a device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle for the benefit of providing an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction. (col. 1, lines 38-49; col. 2, lines 29-32; col. 6, lines 16-20; FIG. 1: 9a, 9b, 9c, 9d, 9e; FIG. 6: 9c, 9d, 9e)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the device for monitoring the environment of a vehicle being parked comprising a measuring device configured to measure a distance of the vehicle to obstacles in the surroundings of the vehicle, as taught by Janssen, with the device disclosed by Tanaka because it would enable the device to provide an object-detection unit which processes both data from object-detection sensors as well as video images so that it is possible at any time for the driver, in a simple fashion, to carry out monitoring and driving correction.

The above combination of Tanaka and Janssen does not disclose:

> a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone; and
>
> a speaker to output an acoustic alert signal when leaving the driving zone.

Luckscheiter, in the same field of endeavor, teaches a system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone for the benefit of assisting a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior. (col. 1, lines 37-40; col. 2, lines 38-45, 57-63)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for providing the operator of a motor vehicle with feedback regarding lane boundaries comprising a powered unit configured to impact a steering wheel of the vehicle for outputting a haptic effect via the steering wheel when leaving the driving zone, as taught by Luckscheiter, with the device disclosed by the above combination because it would enable the

device to assist a driver of a motor vehicle to travel within a designated driving lane, thereby helping him curb otherwise risky behavior.

The above combination of Tanaka, Janssen, and Luckscheiter does not disclose:

a speaker to output an acoustic alert signal when leaving the driving zone.

Okamoto, in the same field of endeavor, teaches a parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle for the benefit that the driver can operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route. ([0002], [0043], [0052], [0072]; FIG. 2: 8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the parking support unit for assisting a steering operation of a motor vehicle during parallel parking, wherein the unit comprises a speaker, so that when the actual vehicle route image is deviates from the predicted vehicle route image, a phonic warning is given to a driver of the vehicle, as taught by Okamoto, with the device disclosed by the above combination because it would enable the device to alert the driver to operate the steering wheel to bring the actual vehicle route to coincide with the predicted vehicle route.

(10) Response to Argument

A. ANTICIPATOIN REJECTIONS OF CLAIMS 10-13, 15, 16, 19, 20, AND 28

Claims 10 to 13, 15, 16, 19, 20, and 28 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Tanaka.

CLAIM 10

Against the rejection of claim 10, the appellants argue that nothing in the Tanaka reference identically discloses (or even suggests) a driving zone delimited by two paths along which a fixed point of the vehicle can be guided during a move and outside of which the vehicle may collide, as provided for in the context of the presently claimed subject matter.

In response to this argument against the rejection of claim 10, claim 10 recites, in relevant part, "a device for driving assistance for parallel parking a vehicle, comprising: ... wherein the parallel parking driving instructions provide a driver with a driving zone situated between two trajectories which are calculated in such a way that the vehicle can be moved within the driving zone." As cited in the Final Rejection, Tanaka discloses a display that depicts the anticipated course R of the vehicle. The anticipated course enables the driver to adjust the steering of the vehicle by comparison with a parking path S, which is depicted on the same display. ([0053]) Further explaining this aspect of the invention, Tanaka discloses that the system calculates the parking path S from the current position of the vehicle to the parking target point. ([0057]) Tanaka discloses that the calculated parking path S makes it possible for the driver "to grasp the relationship between relative positions to obstacles such as the forward parking vehicle 12, the backward parking vehicle 13, and the road shoulder edge 14." ([0057]) Tanaka discloses that the system calculates parking path S so as to avoid a collision with the obstacle at the target point. ([0058])

As depicted in FIG. 1, the parking path S includes left and right vehicle trajectory boundaries. The boundaries of parking path S define a zone of vehicle travel. As long as the

vehicle travels within the boundaries of paring path S, the vehicle will avoid colliding with an obstacle.

The foregoing shows that Tanaka discloses a system that provides a parking path that defines a zone situated between two boundaries calculated in such a way that the vehicle can be moved within the zone, as recited by claim 10.

Against the rejection of claim 10, the appellants devote a significant portion of their arguments to the meaning of a 'trajectory,' but claim 1 does not recite a trajectory that embodies the limitations for which the appellants argue. The appellants argue that in Fig. 2 of the present application, the driving zone is defined by the two trajectories (27, 28) along which the center of the rear axle (40) of vehicle (20) can safely travel. The appellants argue that dashed lines (44, 45) delimit an area occupied by the vehicle during travel, in which an area lateral to vehicle (20) is not exceeded during travel along both trajectories. The appellants argue that these lines clearly do not constitute trajectories as defined in the presently claimed subject matter, since they do not describe two paths along which a fixed point of the vehicle can move safely for parking.

In response to these arguments against the rejection of claim 10, claim 1 does not recite trajectories along which the center of the rear axle of the vehicle can safely travel, nor does claim 1 recite that the driving zone consists of the area lateral to the vehicle that is not exceeded during travel along a trajectory of a point in the center of the rear axle. Although the appellants argue that these "pilot lines" do not qualify as trajectories because they do not describe two paths along which a fixed point of the vehicle can move safely for parking, claim 1 does not recite that a trajectory describes a path along which a fixed point of the vehicle can move safely for parking. Moreover, even were claim 1 to recite two trajectories that describe two paths along which a

fixed point of the vehicle can move safely for parking, as the appellants argue, this limitation still would not disqualify the "pilot lines" as trajectories because these pilot lines describe two paths along which a fixed point of the vehicle can move safely, namely the left rear corner of the vehicle and the right rear corner of the vehicle. The limitation for which the appellants argue -- that trajectories describe two paths along which a fixed point of the vehicle can move safely -- does not require that the trajectories describe two paths along which the ***same*** fixed point of the vehicle can move safely.

Against the rejection of claim 10, the appellants further argue that Tanaka refers to a system that calculates a singular *parking path S* so as to avoid a collision with an obstacle, but this does not support the Office's conclusion that "a parking path defines a zone situated between two boundaries" (Appellants Brief at page 9, quoting Final Office Action of August 4, 2009, page 18, emphasis added by Appellants). The appellants argue that there is a difference between a trajectory as defined in the presently claimed subject matter (a path along which a fixed point of a vehicle can safely travel for parking) and a boundary as is depicted as to parking path S in Fig. 1 of Tanaka that merely delimits an area occupied by the vehicle during travel, in which that area is not exceeded during travel along a parking path.

In response to this argument against the rejection of claim 10, contrary to the appellants' representation that Tanaka refers to a system that calculates a ***singular*** parking path S (Appellants' Brief at page 9), Tanaka discloses a parking assist system that continually monitors the movement of the vehicle and updates both the parking path S and the anticipated course R in correspondence with the movement of the vehicle. ([0011], [0012], [0051], [0053], [0054], [0071], [0074]) Tanaka's system calculates an updated parking path whenever movement of the

vehicle requires an updated parking path. Contrary to the appellants' characterization that Tanaka's system merely delimits an area occupied by the vehicle during travel which is not exceeded during travel along a parking path, Tanaka's system calculates the parking path by considering an avoidance point so that the vehicle can move within the parking path without colliding with the obstacle at the avoidance point. The continual updating of the parking path in correspondence with the movement of the vehicle entails the determination of the extreme limits that various parking paths can occupy so that the vehicle can avoid the obstacle at the avoidance point. In the foregoing way, Tanaka's system discloses at least two trajectories, namely the trajectory of the left side of the vehicle, the trajectory of the right side of the vehicle, and any changes of those trajectories necessitated by movement of the vehicle. Furthermore, Tanaka's system displays driving instructions that provide a driver with a driving zone calculated to fall within the extreme limits within which the vehicle can move into a parking space without colliding with an obstacle at an avoidance point.

Regarding the appellants' reference that a trajectory as defined in the presently claimed subject matter is a path along which a fixed point of a vehicle can safely travel for parking, claim 10 does not contain any such limitation, nor would claim 1 avoid the prior art if it did contain such a limitation, as has been addressed more fully above. Therefore, whatever differences the appellants claim exist, on that basis, between a trajectory as recited in claim 10 and the boundaries of the parking path disclosed by Tanaka, those differences are irrelevant to the rejection of claim 10.

Against the rejection of claim 10, the appellants further argue that the Office Actions to date essentially ignore the proper meaning of the term "trajectories" which is to be understood in

view of the specification.

In response to this argument against the rejection of claim 10, the appellants' specification states, "In addition to this definition of a trajectory, a travel path of the vehicle may also be defined via other, fixed points of the vehicle, e.g., at the corners of the vehicle contour or at the position of the wheels." (Specification, p. 8, lines 1-4) According to the appellants own disclosure, the trajectory need not be defined by the path of the center of the real axle of the vehicle. The appellants' specification explicitly acknowledges that the paths of the corners of the vehicle contour qualify as alternative trajectories that define a travel path of the vehicle.

Because the appellants' specification does not, by its own terms, adopt a single definition of a 'trajectory,' no such limitation can be implied into claim 10, the plain language of which does not recite such a limitation. Furthermore, even were such a limitation implied into claim 10, the appellants' specification specifically identifies the corners of the vehicle contour as fixed points on the vehicle that, when they move, describe paths constituting trajectories that define travel paths of the vehicle within the meaning of the disclosure.

Contrary to the appellants assertion that "*the Final Office Action simply reflects its own unreasonable reading of the term 'trajectories' without making a distinction with the term 'boundary,' as used in the Office Actions to date to describe the limits of the area occupied by the vehicle during travel along a parking path*," (Appellants Brief, page 10, emphasis in original) the Office Actions to date have relied on the appellants' disclosure that the path of the movement of the corners of the vehicle constitute trajectories that define a travel path of the vehicle.

For all of the foregoing reasons, claim 10 is not allowable, and there being no basis to withdraw the rejection of claim 10, no basis exists to withdraw the rejection of claims 11-13, 15,

16, 19, 20, and 28, which depend from claim 10.

CLAIM 28

Against the rejection of claim 28, the appellants argue that nothing in the Tanaka reference identically describes a driving range, as provided for in the context of the presently claimed subject matter, since at best, the Tanaka reference may merely refers to a parking path of the driver - and not a driving range.

In response to this argument against the rejection of claim 28, claim 28 recites, in relevant part, "... wherein driving instructions indicate to the driver a driving range between two trajectories which designate two different routes, the routes being determined so that the vehicle is moveable to park it within the driving range." Tanaka discloses a display that depicts the anticipated course R of the vehicle, as cited in the Office Action. The anticipated course enables the driver to adjust the steering of his vehicle by comparison with a parking path S, which is depicted on the same display. ([0053]) Further explaining this aspect of the invention, Tanaka discloses that the system calculates the parking path S from the current position of the vehicle to the parking target point. ([0057]) Tanaka discloses that the calculated parking path S makes it possible for the driver "to grasp the relationship between relative positions to obstacles such as the forward parking vehicle 12, the backward parking vehicle 13, and the road shoulder edge 14." ([0057]) Tanaka discloses that the system calculates parking path S so as to avoid a collision with an obstacle. ([0058])

As depicted in FIG. 1, the parking path S includes left and right vehicle trajectory boundaries. The left and right boundaries of the parking path S define a driving range. As long as the vehicle travels within the boundaries of parking path S, the vehicle will avoid colliding

with an obstacle.

Against the rejection of claim 28, the appellants further argue that Tanaka does not identically disclose (or suggest) the claim feature of two different determined routes.

Regarding this argument against the rejection of claim 28, Tanaka discloses that the system calculates a parking path S from the current position of the vehicle to the parking target point and depicts the path S on a display. ([0057]) Tanaka discloses that the calculated parking path S makes it possible for the driver "to grasp the relationship between relative positions to obstacles such as the forward parking vehicle 12, the backward parking vehicle 13, and the road shoulder edge 14." ([0057]) Tanaka discloses that the system calculates parking path S so as to avoid a collision with an obstacle. ([0058])

As depicted in FIG. 1, parking path S includes left and right vehicle trajectory boundaries. The left and right boundaries of parking path S constitute two different determined routes, one on the left and one on the right. The left boundary of parking path S defines the leftmost route of vehicle travel, and the right boundary of parking path S defines the rightmost route of vehicle travel. As long as the vehicle moves within the boundaries of the left and right routes of parking path S, the vehicle will avoid colliding with an obstacle.

The foregoing shows that Tanaka discloses a system that outputs driving instructions to a driver, in the form of the display of parking path S, wherein the driving instructions indicate a driving range between two trajectories which designate two different determined routes, in the form of the left and right boundaries of parking path S, so that the vehicle is moveable to park within the driving range by moving within the boundaries of paring path S, as recited by claim 28.

Against the rejection of both claim 10, the appellants argue that the Office may not ignore the reasonable interpretation of the terms "driving range" and "two different determined routes," as provided for in the context of the claimed subject matter -- and as would be understood by a person having ordinary skill in the art based on the specification.

Regarding the argument against the rejection of claims 10, the appellants' specification states, "In addition to this definition of a trajectory, a travel path of the vehicle may also be defined via other, fixed points of the vehicle, e.g., at the corners of the vehicle contour or at the position of the wheels." (Specification, p. 8, lines 1-4) According to the specification, the paths of the corners of the vehicle contour constitute trajectories that define travel paths of the vehicle. Contrary to ignoring the reasonable interpretation of the terms "driving range" and "two different determined routes," the Final Rejection applies those terms in a way that is consistent with the provision in the specification that the paths of the corners of the vehicle contour constitute trajectories that define travel paths of the vehicle.

For all the foregoing reasons, claim 28 is not allowable, and the rejection should not be withdrawn.

B. THE OBVIOUSNESS REJECTIONS OF CLAIMS 14, 21, 23, 24, 26, AND 27

Claims 14, 21, 23, 24, and 27 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Janssen. Claim 26 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of Janssen and further in view of Okamoto.

CLAIMS 14, 21, 23, 24, 26, AND 27

Against the rejection of claims 14, 21, 23, 24, 26, and 27, the appellants argue that claims

14, 21, 23, 24, 26, and 27 ultimately depend from claim 10, and they are therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

In response to the argument against the rejection of claims 14, 21, 23, 24, 26, and 27, the response to the arguments against the rejection of claim 10 is stated above, and that response is incorporated here as the response to the argument against the rejection of claims 14, 21, 23, 24, 26, and 27. There being no basis for withdrawal of the rejection of claim 10, no basis exists for withdrawal of the rejection of claims 14, 21, 23, 24, 26, and 27, which depend from claim 10.

C. THE OBVIOUSNESS REJECTION OF CLAIM 17

Claim 17 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Luckscheiter.

CLAIM 17

Against the rejection of claim 17, the appellants argue that claim 17 depends from claim 10, and it is therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

In response to the argument against the rejection of claim 17, the response to the arguments against the rejection of claim 10 is stated above, and that response is incorporated here as the response to the argument against the rejection of claim 17. There being no basis for withdrawal of the rejection of claim 10, no basis exists for withdrawal of the rejection of claim 17, which depends from claim 10.

D. THE OBVIOUSNESS REJECTION OF CLAIM 18

Claim 18 has been rejected und 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Okamoto (US PG Pub. 2003/0045973 A1).

CLAIM 18

Against the rejection of claim 18, the appellants argue that claim 18 depends from claim 10, and it is therefore allowable for essentially the same reasons as claim 10, since the secondary reference does not cure -- and is not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

In response to the argument against the rejection of claim 18, the response to the arguments against the rejection of claim 10 is stated above, and that response is incorporated here as the response to the argument against the rejection of claim 18. There being no basis for withdrawal of the rejection of claim 10, no basis exists for withdrawal of the rejection of claim 18, which depends from claim 10.

E. THE OBVIOUSNESS REJECTION OF CLAIMS 22 AND 25

Claims 22 and 25 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Janssen and further in view of Luckscheiter.

CLAIMS 22 AND 25

Against the rejection of claims 22 and 25, the appellants argue that claims 22 and 25 ultimately depend from claim 10, and they are therefore allowable for essentially the same reasons as claim 10, as presented, since the secondary references do not cure -- and are not

asserted to cure -- the critical deficiencies of the primary reference as to the present application.

In response to the argument against the rejection of claims 22 and 25, the response to the arguments against the rejection of claim 10 is stated above, and that response is incorporated here as the response to the argument against the rejection of claims 22 and 25. There being no basis for withdrawal of the rejection of claim 10, no basis exists for withdrawal of the rejection of claims 22 and 25, which depends from claim 10.

F. THE OBVIOUSNESS REJECTION OF CLAIMS 29 AND 30

Claims 29 and 30 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka in view of Janssen, further in view of Luckscheiter, and in further view of Okamoto.

CLAIMS 29 AND 30

Against the rejection of claims 29 and 30, the appellants argue that claims 29 and 30 ultimately depend from claims 28 and 10, respectively, and they are therefore allowable for essentially the same reasons as their independent claims, since the secondary references do not cure -- and are not asserted to cure -- the critical deficiencies of the primary reference as to the present application.

In response to the argument against the rejection of claims 29 and 30, the responses to the arguments against the rejection of claims 10 and 28 are stated above, and those responses are incorporated here as the responses to the argument against the rejection of claims 29 and 30. There being no basis for withdrawal of the rejection of claims 10 and 28, no basis exists for withdrawal of the rejection of claims 29 and 30, which depends from claims 10 and 28, respectively.

Against all the obviousness rejections, the appellants argue that examiner relies on hindsight in reaching his obviousness determinations, but one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In response to this argument against the all the obviousness rejections, MPEP 7.07.03 provides that in response to appellants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellants' disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

For each obviousness rejection, the Final Rejection lists a citation of the references themselves which provides the motivation for the combination of the references. No obviousness rejection has been based on knowledge gleaned only from the appellants' disclosure. Moreover, Tanaka, Janssen, and Okamoto all pertain to parking assistance systems, so all three references are analogous art. Luckscheiter pertains to a driving assistance apparatus, so Luckscheiter involves the same field of endeavor. Because the cited references involve analogous art and the same field of endeavor, one of ordinary skill in the art at the time of the invention would have been aware of these references. For the foregoing reasons, the obviousness combinations in the Final Rejection are valid.

CONCLUSION

For all the foregoing reasons, the rejection of claims 10-30 should not be reversed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/JM/

Conferees:

/Daniel Wu/
Supervisory Patent Examiner, Art Unit 2612

/BENJAMIN C. LEE/

Supervisory Patent Examiner, Art Unit 2612